

With regard to Claims 5 and 22, the Examiner asserts that the term "at least" renders the claims indefinite. Applicant respectfully disagrees, and submits that one of ordinary skill in the art would readily ascertain the metes and bounds of the claims, especially in view of the teachings in the specification. Nevertheless, in view of the above amendments to Claims 5 and 22, Applicant respectfully requests the Examiner to withdraw these rejections.

With regard to Claims 1, 2, and 10-42, the Examiner asserts that the claims should recite that the continuous phase of the suspensions is water or an aqueous medium. Again, Applicant respectfully submits that such an amendment is unnecessary, as one of ordinary skill in the art would have no difficulty appreciating the scope and meaning of the claims. Nevertheless, in order to facilitate prosecution, Applicant has amended Claim 1 in accordance with the Examiner's suggestion. Accordingly, the rejection should be withdrawn.

III. Rejection Under 35 U.S.C. §102(b)

The Office has rejected Claims 1, 2, 37-39, and 42 under 35 U.S.C. §102(b) as being allegedly anticipated by U.S. Patent No. 3,963, 640 ("*Smith*"). Applicant traverses this rejection.

Smith fails to anticipate the present claims. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently, in a single prior art reference. The identical invention must be shown in as complete detail as is contained in, and must be arranged as required by, the claim. See MPEP § 2131.

Smith is simply not directed to improving high and low shear rheology, as presently claimed; rather, *Smith* is directed to a process for reacting, with high shear, an

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

aqueous solution of alkali metal silicate and an aqueous solution of an aluminum salt to produce a complex alkali metal aluminum silicate polymeric material. Col. 1, lines 56-63. The high shear mixing discussed therein is only to "ensure thorough mixing and the desired chemical reaction and to ensure the formation of a stable dispersion of the product." See col. 3, line 68 – col. 4, line 1. *Smith* simply fails to teach a method for improving the high and low shear rheology of a substance, as set forth in the present claims.

Thus, because *Smith* does not teach each and every limitation of Claims 1, 2, 37-39, and 42, it cannot anticipate the present invention. Accordingly, Applicant requests that this rejection be withdrawn.

III. Rejection under 35 U.S.C. §§ 102(b)/103(a)

Claims 1-11, 13, 17, 32, 37-39, 41, and 42 are rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 4,622,166 to Nakazawa et al. ("*Nakazawa*"). Applicant respectfully traverses this rejection.

Nakazawa fails to teach all the elements of the claimed invention, and therefore cannot represent an anticipatory reference. To anticipate a claim, a single source must contain all of the elements of the claim. See *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1379, 231 U.S.P.Q. 81, 90 (Fed. Cir. 1986).

Nakazawa discloses high-shearing stirring "by using, for example, a colloid mill, a homogenizer, a dispersion mill, a dispersion mixer, a Kady mill or the like." *Nakazawa* at col. 9, lines 31-34. This reference does not particularly point to the use of a Kady mill. In fact, out of the eleven examples in *Nakazawa*, none teaches the use of a Kady

w (1) only ex 11 require a Kady mill

FINNEGAN
HENDERSON
FARABOW
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DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
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mill. Thus, among other necessary modifications, one would need to pick and choose from among the teachings of *Nakazawa* in order to arrive at that particular element of the present claims. This alone militates against the propriety of citing *Nakazawa* as an anticipatory reference. *In re Arkley*, 455 F.2d 586, 587 (CCPA 1972).

Therefore, because the identical invention is not shown in as complete detail as is contained in, and arranged as, the instant invention, Applicant respectfully submits that an anticipation rejection is improper.

Similarly, *Nakazawa* fails to teach or suggest the present claimed invention. The reference relates to a process for improving suspension stability by neutralizing an aqueous cake or slurry with an acid or an alkali metal salt. Col. 2, line 62 - Col. 3, line 12. The reference does not teach or suggest a method for improving the high and low shear rheology of a suspension using a rotor-stator mill, as set forth in the present claims. Furthermore, the teachings of *Nakazawa* would have directed the ordinary practitioner away from the present claimed invention. Although a number of shearing devices are broadly disclosed, including a Kady mill, the reference fails to provide the requisite motivation to select a rotor-stator mill, in a process for improving the high and low shear rheology of a suspension according to the present claims.

Absent clear and particular motivation to modify the teachings of *Nakazawa*, and Applicant submits that no such motivation exists, the § 103(a) rejection is improper and should be withdrawn.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

IV. Rejections Under 35 U.S.C. §103(a)

The Office has rejected Claims 1-11, 13, 17, 32, 37-39, 41, and 42 under 35 U.S.C. §103(a) as obvious over *Nakazawa* for the reasons of record. Further, the Office has rejected Claim 12 under 35 U.S.C. §103(a) as obvious over *Nakazawa* in view of Weiser, "A Textbook of Colloid Chemistry," 2d ed. (1949), page 158 ("*Weiser*") for the reasons of record. Applicant respectfully traverses and requests withdrawal of these rejections, for at least the following reasons.

Nakazawa, either alone or taken together with *Weiser*, fails to teach or suggest the present claimed invention. As the Federal Circuit has stated, the Office must demonstrate a teaching or suggestion to combine the prior art references to overcome the "powerful attraction of a hindsight-based obviousness analysis." *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999).

In this case, the Office has not met its burden. As discussed above, *Nakazawa* discloses many types of machinery to accomplish high shear stirring. However, it fails to provide the requisite "clear and particular" motivation necessary to select a Kady mill from among the disclosed colloid mill, homogenizer, dispersion mill, and dispersion mixer. *Id.* Applicant submits that it is only on the basis of hindsight-based reasoning, using the present application disclosure as a blueprint, that one would have selected the Kady mill. However, such reasoning is improper and is an insufficient basis upon which to maintain a § 103 rejection.

Weiser fails to remedy the substantial deficiencies of *Nakazawa*. *Weiser* is directed to a mill used for "breaking up of secondary aggregates and for the formation of emulsions." This is neither consistent with *Nakazawa*, nor with the claimed invention.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

APPENDIX: Version With Markings To Show Changes Made

Pursuant to 37 CFR 1.121(c)(1)(ii)

In the Claims:

1. A method for improving the high and low shear rheology of a substantially grit-free and substantially fluid particulate suspension, the method comprising processing the suspension using a rotor-stator mill to produce a product, wherein the suspension contains at least one dispersant and water, and wherein the dispersion occurs at a pH greater than 6.

5. The method of Claim 3 wherein the pH greater than 6 is [selected from the group consisting of at least] obtained by the presence of at least one alkaline substance [at least soda ash, sodium hydroxide and ammonium hydroxide].

22. The method of Claim 20 further comprising removing additional water from the redispersed filter cake by a process [selected from the group consisting of at least] chosen from evaporation and drying.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

There is therefore no motivation in this reference to combine it with *Nakazawa*, or a reasonable expectation of success for the combination. Accordingly, Applicant respectfully submits that this rejection is improper and should be withdrawn.

VI. Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully requests the reconsideration and reexamination of this application and the timely allowance of the pending claims. If the Examiner believes a telephone conference would be useful in resolving any outstanding issues, he is respectfully urged to contact Applicant's undersigned counsel at (202)408-4374.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: August 22, 2002

By: 

Brian M. Burk
Reg. No. 44,455

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com